Too Little Credit, Too Much Work, and Not Enough Groups! A Deep-Dive into Data on the Challenges Women in Agriculture Face

Feed the Future is making a splash in the world of development data. Through this U.S. Government initiative, we've championed the collection and use of quality data in all of the work we do to generate quality evidence, strategically inform the design of our programs, and ultimately have a greater impact women's empowerment, along with food security and nutrition.

In partnership with the International Food Policy Research Institute (IFPRI) and the Oxford Poverty and Human Development Initiative, Feed the Future developed the first-ever comprehensive and standardized measure that directly captures data on women's empowerment and inclusion in the agriculture sector, called the **Women's Empowerment in Agriculture Index** (WEAI).

Last year, we published a **baseline report** that summarized the findings from a WEAI survey in 13 Feed the Future countries. We analyzed the data across countries and found that too little credit, too much work, and a lack of membership in social and economic groups are the main constraints to women's empowerment in agriculture.

But that's not all. Dive deeper into the WEAI results with us with these 10 charts.

How do we measure empowerment?

TABLE 1. THE FIVE DOMAINS OF EMPOWERMENT IN THE WEAI

Domain	Indicator	Weight
Production decision-making	Input in productive decisions	1/10
	Autonomy in production	1/10
Access to productive resources	Ownership of assets	1/15
	Purchase, sale, or transfer of assets	1/15
	Access to and decisions on credit	1/15
Control over use of income	Control over use of income	1/5
Community leadership	Group member	1/10
	Speaking in public	1/10
Time allocation	Workload	1/10
	Leisure	1/10

Source: Alkire et al. (2013).

First, some background. The WEAI is made up of two sub-indexes: the five domains of empowerment index and the gender parity index.

As its name indicates, the first assesses women's empowerment in five domains: production, resources, income, leadership and time.

We measure the five domains using 10 indicators, whose corresponding weights you can see in the chart above. We give each indicator a value of 1 if the survey respondent has exceeded a given threshold for the indicator and a value of 0 if the respondent falls below the threshold. The weighted sum of these 10 indicators makes up an individual's empowerment score.

The second index, the gender parity index (GPI), measures women's empowerment relative to that of men by comparing the five domain profiles of women and men in the same household.

We then calculate the weighted average of the two indexes to construct the overall WEAI. This gives a broad picture of women's empowerment by showing not only the proportion of women who are empowered and have gender parity, but also, for the remainder of women, the depth of their disempowerment and gender disparity. Values for the WEAI and its sub-indexes range between 0 and 1, with higher numbers (like 0.98) indicating greater empowerment.

It's worth noting that while we'll talk about country-by-country results here, what we actually measured with the WEAI baseline survey is empowerment within specific *regions* of each country. We call these "Feed the Future zones of influence" and they represent the areas where Feed the Future targets its work.

You can explore more by visiting **WEAI 101** on the IFPRI website.

How did each country score?

TABLE 1. 5DE, GPI AND WEAI SCORES

Country	Region	5DE	GPI	WEAI	Ranking
Bangladesh	Asia	0.65	0.80	0.66	Low
Cambodia	Asia	0.98	0.99	0.98[a]	High
Nepal	Asia	0.79	0.89	0.80	Medium
Tajikistan	Asia	0.68	0.79	0.69	Low
Haiti	Latin America & Caribbean	0.83	0.94	0.85	High
Honduras	Latin America & Caribbean	0.74	0.87	0.75	Medium
Kenya	East Africa	0.71	0.81	0.72	Low
Rwanda	East Africa	0.90	0.96	0.91	High
Uganda	East Africa	0.85	0.92	0.86	High
Ghana	West Africa	0.70	0.81	0.71	Low
Liberia	West Africa	0.66	0.95	0.69	Low
Malawi	Southern Africa	0.83	0.91	0.84	Medium
Zambia	Southern Africa	0.79	0.89	0.80	Medium

Sources: Cambodia Development Resource Institute (2012); ICF International (2012); IFPRI (2012a, 2012b); Kansas State University, Department of Agricultural Economics (2012); Optimal Solutions Group, LLC (2013); Westat (2012a, 2012b, 2012c, 2012d, 2013a, 2013b, 2013c).

Note: [a] Compared to other countries, Cambodia's high WEAI score makes it an outlier in this analysis. Also, data on the public speaking indicator were not collected, thus Cambodia's results should be interpreted with caution and not directly compared to the other countries.

The chart above summarizes WEAI scores by region and divides them into high, medium and low (empowerment) rankings. Bangladesh has the lowest WEAI score at 0.66 while Cambodia has the highest at 0.98. As you can see, no global pattern emerges regarding the scores. This isn't surprising given the diversity of the countries included and the Feed the Future zones in them.

The real value of the WEAI is realized when we dive a little deeper...

Which indicators contribute most to disempowerment across countries?

FIGURE 1. CONTRIBUTION OF EACH INDICATOR TO WOMEN'S DISEMPOWERMENT
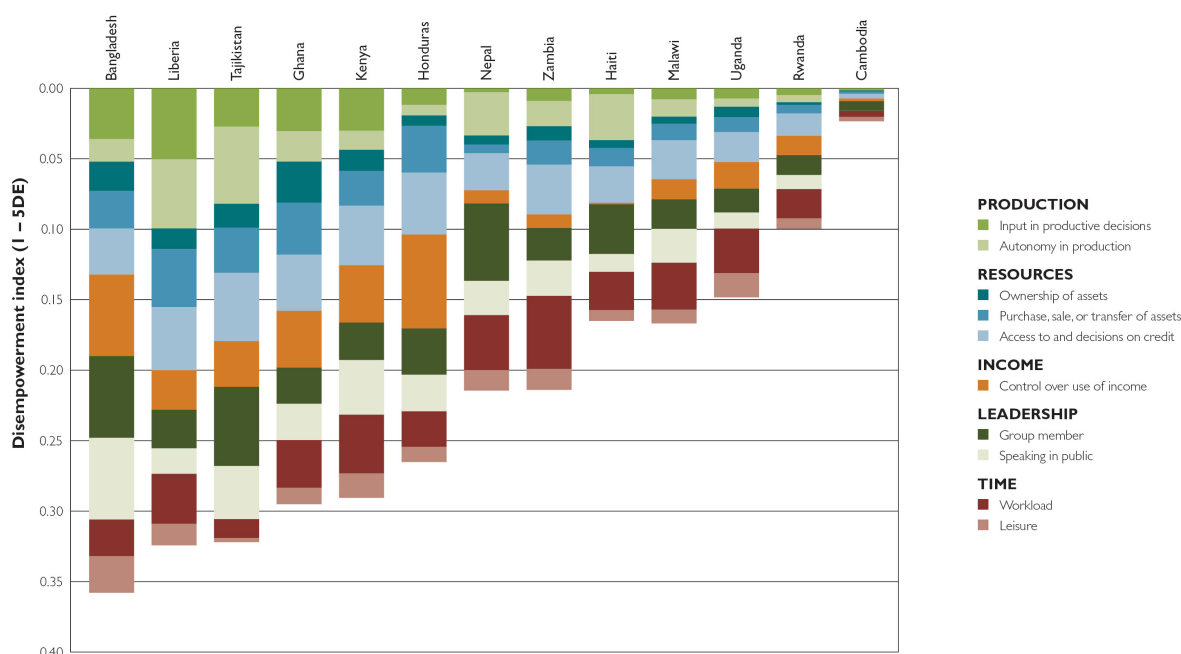
This colorful table shows the contribution of each indicator to women's disempowerment and, if you look closely, contains a wealth of information. You'll notice that women in Bangladesh are more disempowered than women in Cambodia. And then you might notice that access to credit (light blue), group membership (dark green), and workload (burgundy) contribute most to women's disempowerment.

What's really interesting though is to examine the individual indicators. For example, although Ghana and Kenya have very similar scores, their disempowerment composition differs. Autonomy in agricultural production and ownership of assets contribute more to disempowerment in Ghana, whereas speaking in public and workload are greater constraints for women in Kenya.

What else did we discover about women's disempowerment?

TABLE 2. TOP CONTRIBUTORS TO WOMEN'S DISEMPOWERMENT

Constraints	Bangladesh*	Cambodia	Nepal	Tajikistan	Asia total	Haiti	Honduras	LAC total	Kenya	Rwanda	Uganda	East Africa total	Malawi	Zambia	Southern Africa total	Ghana**	Liberia	West Africa total	Number of countries with this top constraint	Indicators' total points count
Input in productive decisions																	1	1	1	3
Autonomy in production			3	2	2	3		1									2	1	4	6
Ownership of assets																				
Purchase, sale, or transfer of assets							3	1								2		1	2	3
Access to and decisions on credit		3		3	2		2	1	1	1	2	3	2	2	2	1	3	2	10	20
Control over use of income	1				1		1	1	3	3	3	3				1		1	6	12
Group member	1	1	1	1	4	1		1		2		1							6	17
Speaking in public	1				1								3	3	2				3	5
Workload		2	2		2	2		1	2		1	2	2	1	2				7	17
Leisure																				

Source: Authors.

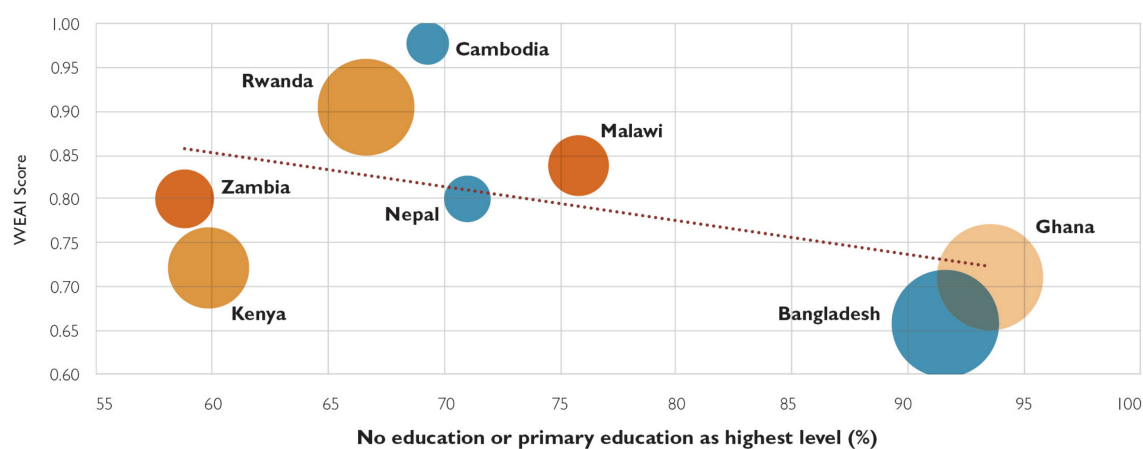Notes: * = A three-way tie among the top three constraints; ** = A two-way tie among the top two constraints; LAC = Latin America and the Caribbean. The three indicators that represent the greatest constraints to empowerment are identified and ranked for women in each country; they are indicated by a "1", "2" or "3" in each of the country columns. The regional totals represent the number of countries in which a given indicator was a top constraint. The column "Number of countries with this top constraint," counts the number of countries for which an indicator appeared as one of the top three constraints. The column "Indicators' total points count," assigns the highest constraint 3 points, the second-highest constraint 2 points, and the third-highest constraint 1 point, and aggregates these points for all indicators across all countries.

Access to and decision-making power over credit is the top contributor to women's disempowerment. This table also shows us that credit ranks among the top three contributors to women's disempowerment in nearly all the countries surveyed. Across countries in Asia, group membership is actually the primary constraint to women's empowerment, whereas across all countries surveyed in Africa, credit ranks among the top three.

What about men?

TABLE 3. TOP CONTRIBUTORS TO MEN'S DISEMPOWERMENT

Constraints	Bangladesh	Cambodia	Nepal	Tajikistan	Asia total	Haiti	Honduras	LAC total	Kenya	Rwanda	Uganda	East Africa total	Malawi	Zambia	Southern Africa total	Ghana	Liberia	West Africa total	Number of countries with this top constraint	Indicators' total points count
Input in productive decisions																				
Autonomy in production			3	1	2	2		1									1	1	4	9
Ownership of assets																				
Purchase, sale, or transfer of assets							3	1								2		1	2	3
Access to and decisions on credit		3		3	2		1	1	2	2	2	3	2	3	2	1	2	2	10	21
Control over use of income		2			1														1	2
Group member	1	1	1	2	4	1	2	2	3	3	3	3	1	2	2	3		1	12	25
Speaking in public	2				1														1	2
Workload	2		2		2	3		1	1	1	1	3	1	1	2	2	3	2	10	23
Leisure																				

Source: Authors.

Note: LAC = Latin America & the Caribbean. The three indicators that represent the greatest constraints to empowerment are identified and ranked for women in each country; they are indicated by a 1, 2, or 3 in each of the country columns. The regional totals represents the number of countries in which a given indicator was a top constraint. The column "Number of countries with this top constraint", counts the number of countries for which an indicator appeared as one of the top three constraints. The column "Indicators' total points count", assigns the highest constraint three points, the second-highest constraint two points, and the third-highest constraint one point and aggregates these points for all indicators across all countries.

A key innovation of the WEAI is that we administer the survey to both the primary woman and the primary man in the same household. This means the data collected for the WEAI could feasibly be used to construct a MEAI! But for now, we analyzed the data to also report on the greatest constraints to men's empowerment.

Interestingly, all countries except Liberia ranked group membership as a top contributor to men's disempowerment. This table also shows us that workload ranks as the second-most binding constraint to men's empowerment and is among the top three contributors to disempowerment in all countries except Cambodia, Honduras and Tajikistan.

What might *affect* empowerment?

To answer this question, let's look at education. How does education affect women's empowerment? The associations between women's empowerment and education are generally quite strong and intuitive, though there are exceptions. Lower scores (disempowerment) are associated with higher proportions of households in which members have no education or the highest level achieved is only primary education, as noted in the chart above.
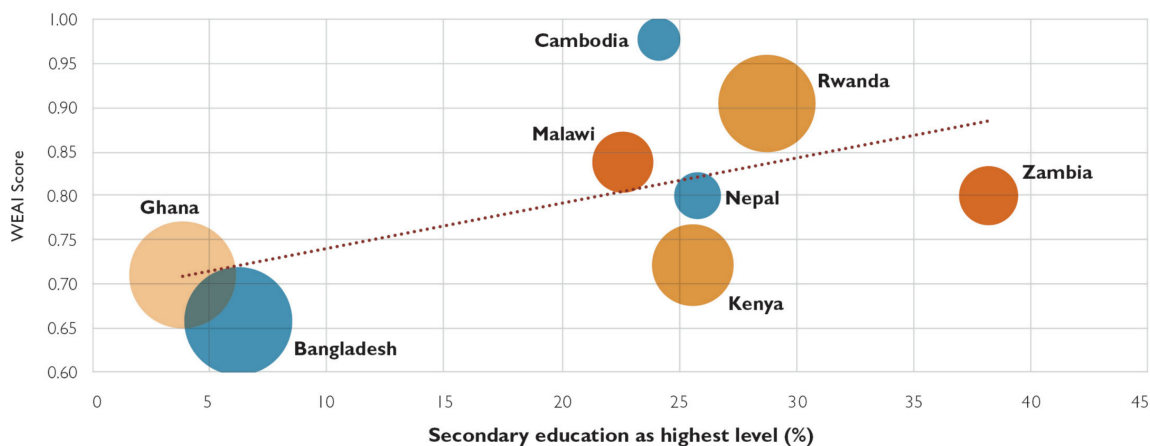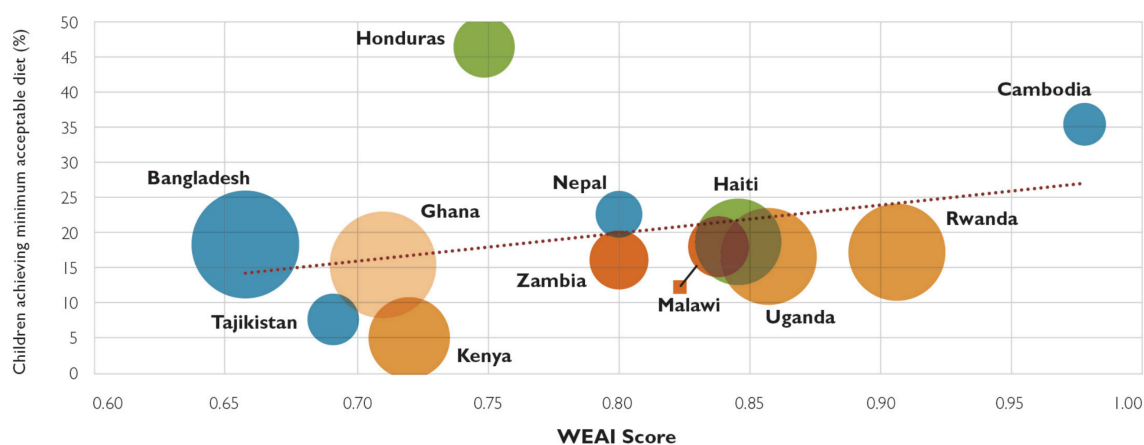
Note: Correlation coefficient is significant (excluding Cambodia from the analysis). The bubbles colors represent the various regions covered in this report. Blue = Asia, green = Latin America and the Caribbean, dark orange = Southern Africa, medium orange = East Africa, light orange = West Africa. The dotted line represents the trend line for the bubbles graphed, or the correlation between the WEAI score and the indicator graphed; only 8 of 13 countries are represented in this figure. No statistics were available for Haiti, Honduras, Liberia, Tajikistan, and Uganda.

Higher women's empowerment scores are associated with higher proportions of households in which members have secondary education, although Cambodia and Kenya appear as outliers: both have secondary education rates of approximately 25 percent but vastly different WEAI scores.

Let's take a look at the data in a different way.

What might *result* from empowerment?

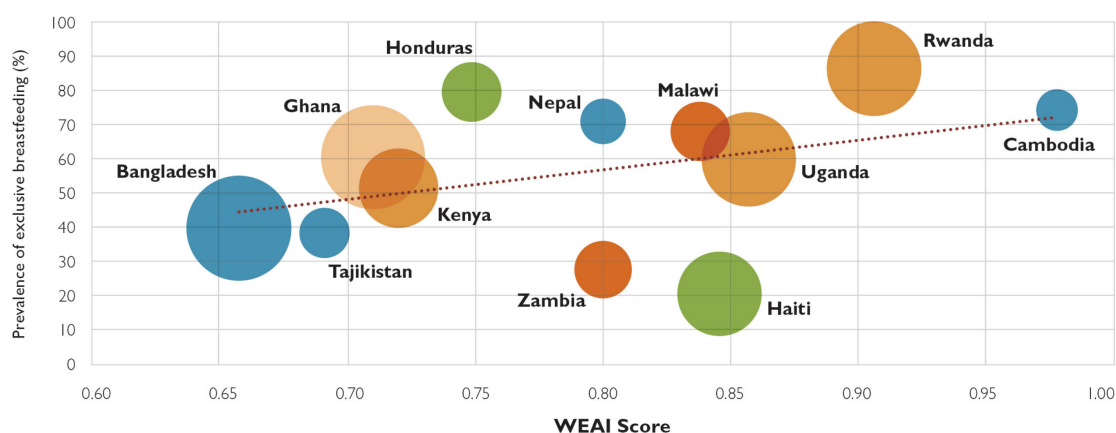**FIGURE 11. CHILDREN ACHIEVING A MINIMUM ACCEPTABLE DIET (%)**

Sources: Cambodia Development Resource Institute (2012); ICF International (2012); IFPRI (2012a, 2012b); Kansas State University, Department of Agricultural Economics (2012); Optimal Solutions Group, LLC (2013); Westat (2012a, 2012b, 2012c, 2012d, 2013a, 2013b, 2013c).

Note: Correlation coefficient is not significant. The bubbles colors represent the various regions covered in this report. Blue = Asia, green = Latin America and the Caribbean, dark orange = Southern Africa, medium orange = East Africa, light orange = West Africa. The dotted line represents the trend line for the bubbles graphed, or the correlation between the WEAI score and the indicator graphed.

Here, we examine two **Feed the Future indicators** for maternal behavior: minimum acceptable diet and exclusive breastfeeding. The first indicator measures the proportion of children 6-23 months of age who receive a minimum acceptable diet, apart from breast milk, and tracks progress on improving this key quality and quantity dimension of children's diets. The second indicator measures the percent of children 0-5 months of age who were exclusively breastfed, a practice that provides children with significant health and nutrition benefits.

What we found is that there is a strong positive relationship between female empowerment and the prevalence of children receiving a minimum acceptable diet. That is, the countries with higher female empowerment also have higher prevalence of children receiving a minimum acceptable diet.

FIGURE 12. EXCLUSIVE BREASTFEEDING (%)

Sources: Cambodia Development Resource Institute (2012); ICF International (2012); IFPRI (2012a, 2012b); Kansas State University, Department of Agricultural Economics (2012); Optimal Solutions Group, LLC (2013); Westat (2012a, 2012b, 2012c, 2012d, 2013a, 2013b, 2013c).

Note: Correlation coefficient is not significant. The bubbles colors represent the various regions covered in this report. Blue = Asia, green = Latin America and the Caribbean, dark orange = Southern Africa, medium orange = East Africa, light orange = West Africa; the dotted line represents the trend line for the bubbles graphed, or the correlation between the WEAI score and the indicator graphed; Liberia is not represented in this figure as no statistics were available.

We also found a strong positive relationship between higher female empowerment and higher rates of exclusive breastfeeding for children under 6 months old, noted in the chart above.

How is the WEAI making a difference?

Perhaps the biggest splash we're making though is how we're using the WEAI baseline results to improve Feed the Future's work. By better understanding women's empowerment and the dynamics around it in these countries, we're better able to target our development efforts to address the greatest constraints women (and men) in agriculture face.

Let's revisit Bangladesh, which received the lowest WEAI score. The WEAI results prompted the Feed the Future team there to design a project focused on women's empowerment. Through targeted efforts such as training and technical assistance on entrepreneurial literacy, leadership and life skills, Feed the Future is addressing the top constraints to empowerment, as identified by the WEAI, that women in Bangladesh face. Other Feed the Future countries are similarly diving into the WEAI data to inform programming.

Through Feed the Future, we're working to create lasting reductions in global poverty and hunger by boosting inclusive agricultural growth and improving nutrition, particularly for women and children. Evidence already shows that when the status of women is improved, agricultural productivity increases, poverty is reduced, and nutrition improves. To achieve Feed the Future's objectives, we need to empower women.

Diving into the WEAI data has given us crucial insights into empowerment and is helping us monitor progress toward this goal.

Find all the data and the full baseline report on the **Feed the Future website***.*